

Manual Reduction & Elective Herniotomy Is A Safe Option For Incarcerated Inguinal Hernias In Children

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In span of 14 months 120 Inguinal hernias which presented to the department were analysed. Ninety Eight children were admitted through outpatients. Twenty Two patients presented in emergency as incarceration. All incarcerated hernias were subjected to manual reduction under sedation. Nineteen incarcerated hernias were reduced. Three out of 22 incarcerated hernias had to be operated in emergency as they showed signs of strangulation and could not be reduced. They presented after 24 hours of incarceration. Those reduced manually (19) were operated after 2-3 days on regular operating list. Our experience of first manually reducing the incarcerated hernias and then operating after 2-3 days during the same admission, with no mortality and very low morbidity is discussed.

Key Words: Inguinal Hernia, Incarceration, Strangulation.

Incarceration occurs in 10-12% of all Inguinal hernias¹. It is more common under the age of one year¹⁻³. The previous practice of operating on all incarcerated hernias in emergency lead to high motility and morbidity⁹. Recent concept of conservative management of incarceration by manual reduction under sedation and surgery later on, reduces the mortality and morbidity is well established⁴⁻⁵. This study was designed to evaluate this recent concept in our set up.

Material and Methods:

120 cases of inguinal hernias out of which 105 were males & 15 females ratio being 7:1 were admitted (Table 1) between Jan 1997 to Feb 1998 in the department of paediatric surgery K.E.M.C./ Mayo Hospital Lahore, including 22 cases who had incarceration of hernia as an emergency.

All elective herniotomies were discharged the following day without any complications. Twenty two incarcerated inguinal hernias were received through emergency (Table 2), out of which 20 were males & 2 females ratio being 10:1. Twelve (54%) out of 22 patients were below the age of 1 year.

Table - 1 Distribution Of Inguinal Hernias In Children

(n = 120)	
Left side alone	25 (20.8%)
Right side alone	85 (70.5%)
Bilateral	10 (08.3%)

Table - 2 Distribution Of Incarcerated Inguinal Hernias In Children

(n = 22)	
Left Side Alone	6 (27.2%)
Right Side Alone	16 (72.2%)
Bilateral	

Results:

Except three cases all patients with incarcerated hernias

were managed initially, by manual reduction under sedation. Time of presentation of incarcerated hernia varied from 12 hours to 3 days, average being 24 hours. After successful reduction patients were kept fasted for another 2-4 hours with lower limbs elevated where possible. They were operated electively within two days with a single pre-operative injection of cephradine as prophylactic antibiotic. All of these cases were discharged the next day. On short follow-up after one week no complication in the form of wound infection or Recurrence were noted.

Two females presented with incarcerated hernias, on right side, were operated on regular list after reduction. The ovaries as content of Sac were reduced and herniotomy was done.

Three male patients were explored in emergency as they showed signs of strangulation of bowel. Duration of incarceration was more than 24 hours and in one patient 3 days. Hernial Sac was explored, two had viable but congested small bowel and one had sliding hernia (containing appendix and part of caecum) which were reduced and the Sac was closed. They were kept fasted for 12-24 hours. One patient developed scrotal oedema which regressed in next 2-3 days.

Discussion:

Coran et al report that 12% of all inguinal hernias in children will have incarceration¹⁰. In the present series 18% presented with incarceration.

Incarcerated hernia is not uncommon problem especially in children below the age of one year¹⁻³. Stylianos-s et al have reported incidence of incarceration as high as 85% in 1st year of life and according to Grosfeld this may be 31%¹¹. In the present series incidence of incarceration below one year of age is 54%. All incarcerated hernias are managed easily conservatively^{2-4,5}, with mild sedation and manual reduction followed by elective herniotomy. According to Puri et al more than 80% of all incarcerated hernias are

reduced by using sedation and manual reduction⁴.

Clatworthy, et al have suggested that nearly 50% of incarcerated inguinal hernias required emergency exploration and very few had strangulation. This increases the morbidity and mortality¹⁻⁷⁻⁸ significantly. In present series 13.6% required emergency exploration and none had strangulation hence no mortality and morbidity was around 4% in the form of scrotal Oedema which prolonged hospital stay. In children strangulation rarely leads to gangrene of gut requiring resection and anastomosis. Rowe MI et al reported incidence of intestinal resection 1.4%, Harvey et al reported it around 1.8%⁶⁻⁹. In the present series no gangrene of gut was seen requiring resection. Incarcerated hernias managed by above method is safe without mortality and very little morbidity, most of the patients can be safely discharged on the following day.

Conclusion :

It is concluded that incarceration of hernia should be managed initially by sedation and manual reduction followed by elective operation in 2-3 days time. Emergency exploration is not required in most instances as it may be difficult & dangerous adding to morbidity and mortality significantly. More over children under one year of age are at higher risk of developing incarceration, therefore should be operated sooner rather than keeping on long waiting list.

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